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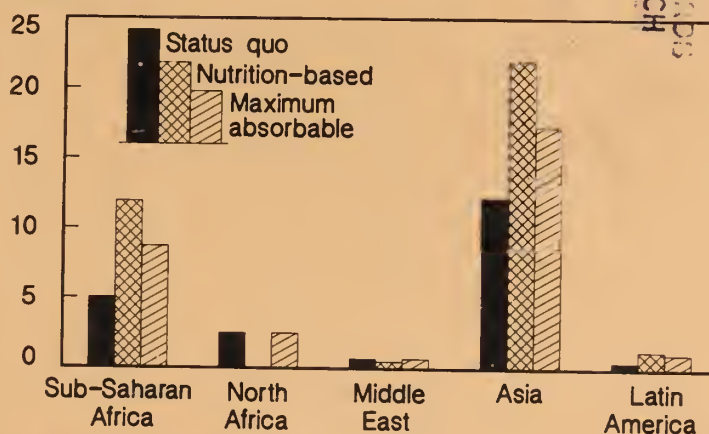
November 1987

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World Food Needs and Availabilities, 1987/88: Fall Update

Additional Food Needs, 1987/88

Million tons



Needs, after stock adjustments, in excess of domestic production and commercial imports.

**WORLD FOOD NEEDS
AND
AVAILABILITIES, 1987/88**

FALL UPDATE

NOVEMBER

1987

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ABSTRACT

This report updates food need assessments for 1987/88 and 1988/89. Cereal shortfalls from requirements to maintain 1987/88 consumption in 69 developing countries are assessed at 26.2 million tons, 17.4 million above the July assessment for 1987/88 and 19.4 million tons above 1986/87 needs. The failed monsoon in India accounts for 90 percent of this shortfall. Bangladesh and Ethiopia also experienced major cereal production failures.

FOREWORD

This is the first update to *World Food Needs and Availabilities*, 1987/88. Food needs assessments for 1987/88 and 1988/89 update those published in the July 1987 report. The annual reports and supplements serve both the requirement of P.L. 480, as amended, that "global assessments of food production and needs" be submitted to the Congress, and the food needs analysis function of the Interagency Food Aid Analysis Working Group (IFAAWG). The IFAAWG is jointly funded by the USDA and AID through its Center of Development Information and Evaluation. Information provided through these reports to the Executive Branch and the Congress is employed along with other information in making tentative fiscal 1987 and 1988 food aid budget allocations. The main report and the supplements are also intended to provide detailed updates on food supplies and additional food needs on both a country-by-country and a world basis. This information is also useful to program and policy officials within donor governments and food-aid-recipient countries, analysts in international organizations and universities, and private agencies involved in food aid distribution.

This report presents two alternative measures of the overall food import requirements (commercial plus concessional) and the additional food needs of each country for 1987/88 and 1988/89. The *status quo* and *nutrition-based* assessments are based on two different sets of normative judgments and assumptions regarding the role of additional food and the considerations that might govern its use. The basic assumption underlying the *status quo* assessment is that additional food would be needed to prevent national food supplies, and hence total consumption, from falling below recent levels. Meeting status quo food needs would in principle stabilize national per capita use by filling shortfalls in domestic production and import capacity. The *nutrition-based* assessment addresses the continuing problem of undernutrition in many of the developing countries. The assumption is that additional food would be needed to close the gap between national food availabilities and an internationally accepted minimum nutritional standard. The nutrition-based estimates thus provide an aggregate measure of the nutritional gap, net of recipient countries' capacity to import food commercially. Calculation of zero nutrition-based food needs does not mean all citizens have a nutritionally adequate diet. In developing countries, poor nutrition is frequently the consequence of poor income distribution.

Status quo food needs assessments are stabilized by the method of estimating annual base period per capita food use. While the base moves forward annually, it does not fluctuate as sharply as would a simple average. Base period food use is calculated as the mean of the most recent 4 years that deviate less than one standard deviation from the mean of the most recent 8 years of record. The method is explained in the Methodological Notes section of this report.

The most current available weather, crop production, and financial data were employed in updating 1987/88 assessments. With new or changed crop information, production and additional food needs estimates change, sometimes sharply. The supplementary reports issued through the year provide users with assessments based on current weather and crop information. The 1988/89 assessments are based on projected agricultural production, trade and general economic trends.

Estimates of commercial import capacity assume the continuance of recent experience in debt payment, and thus the availability of foreign exchange for commercial food purchases. Significant changes in debt payment performance would alter food import capacity and additional food needs.

Neither the status quo nor the nutrition-based food needs measures deals specifically with the ability of a country's infrastructure to absorb food aid without overloading port and transportation capacity, and storage and distribution systems. The maximum absorbable food imports assessment frequently limits the quantity of nutrition-based needs that can physically be provided. The "gap" between maximum absorbable and nutrition-based food needs is one measure of the seriousness of a country's food problem. In a very real sense, the magnitude of the task of achieving the financial and physical capacity to import food, or increasing domestic food production consistent with national food demand, is captured by this measure.

The import requirements and additional food need estimates in *World Food Needs and Availabilities* reports are based on national agricultural and economic data. These estimates assist financial and logistics planning by both donor and food aid recipient countries. It should be apparent, however, that additional food need levels are only a part of the calculus, and that delivering imported food to the communities that are deprived by national food production shortfalls or civil disturbances is a major undertaking. Factors bearing on success include local transportation and communications infrastructure, the financial status of both local and national public service agencies, and the availability of international financial support. The supplementary assessments of additional food needs issued through the year are intended to add to the information available so that food and complementary financial and technical assistance can be made available in a timely fashion.

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ACKNOWLEDGMENTS

Ray Nightingale directed the overall planning and preparation of the report and was assisted in coordination within the Economic Research Service by Rip Landes, and Margaret Missiaen. Rip Landes, Dave Stallings and Suzanne Marks developed and implemented a method of assessing the food needs impact of country cereal stocks objectives and stock carryovers.

The Economic Research Service economists providing analysis for the report included: Rip Landes, Margaret Missiaen, John Parker, Stacey Rosen, Leslie Ross, Pat Scheid, Sara Schwartz and Mark Smith. Secretaries who helped prepare the report included Helen Joyner, and Camelia Spence.

Interagency Food Aid Analysis Working Group food needs workshop contributors and reviewers for the Foreign Agricultural Service, USDA, were Margaret Mason and Dee Linse. Jon O'Rourke, Jeffry Marzilli, Michelle McNabb, Emmy Simmons and Richard Suttor of the Agency for International Development participated in working sessions. AID cleared the report. Ross Quan and Karan Jo McIsaac contributed in workshops and reviewed the report for the Department of State.

Reviewed and approved by the World Agricultural Outlook Board.

SUMMARY

The detailed country tables and narratives in this report include information on the quantities and dollar values of assessed additional food needs, including the need for cereals, pulses, vegetable oils, and dairy products. This summary covers just additional need for cereal, the principal commodity employed in international food aid. Food needs assessments for 1987/88 and 1988/89 are based on information available in October 1987.

Assessed cereal needs in 1987/88

Status quo cereal shortfalls for consumption requirements for 1987/88 in 69 developing countries are estimated at 26.2 million tons, 17.4 million tons above the July estimate, with large increases in East Africa and Asia. The 1987/88 shortfall is 19.4 million tons above estimated needs in 1986/87. This status quo need is more than double the record 1984/85 assessments. While cereal shortfalls have increased in Africa, the primary reason for the global increase in status quo needs is the sharply lower cereals production in Asia. Fortunately, the cereals stock situation is good in India, the country with the greatest production shortfalls, reducing total status quo cereal needs including stock adjustments to 21 million tons.

The worst Indian monsoon in decades has sharply reduced Asian cereal supplies. Status quo needs in Asia, at 17.8 million tons for 1987/88, are up 15.7 million from August. India and Bangladesh dominate with needs of 13.5 and 2.4 million, respectively. However, the estimated stock adjustment for India lowers needs to 7.8 million tons.

Assessed Latin American status quo requirements are unchanged from August.

In Sub-Saharan Africa, cereal shortfalls are placed at 5.3 million tons, up one million from August, and 3.3 million tons over 1986/87. Additional food needs in East Africa and Southern Africa are estimated to be 2.5 and 1.5 million, respectively. The return of drought to Ethiopia has increased needs to 1.5 million tons, up 600,000 tons from the August assessment. North Africa status quo needs are up as increases in cereal production in Egypt have been outweighed by anticipated deterioration in commercial import capacity. Egypt status quo needs are 2 million, up by 750,000.

The 69 countries are estimated to be short 42 million tons of cereals to meet minimum nutritional standards in 1987/88. This is an increase of 25 million tons over 1986/87 assessed needs to meet consumption requirements. Nineteen million of this is in India. Nutrition-based needs have also increased in Sub-Saharan Africa by 1.2 million tons since August. Stock adjustments reduce the overall need to 36 million and the maximum absorbable is assessed at 30 million tons.

Assessed cereal needs in 1988/89

Status quo cereal shortfalls for 1988/89 in 69 developing countries are estimated at 10 million tons, down 16 million tons from the current 1987/88 assessment. This assumes a full recovery of food production in South Asia. In Sub-Saharan Africa, status quo cereal needs for consumption in 1988/89 are about 4.3 million tons. At 1.5 million tons, North Africa, status quo needs are down nearly one half million from 1987/88. Status quo needs in South Asia decline by 15 million from the current 1987/88 assessment. Latin American assessed needs are unchanged.

Nutrition-based needs, at 26 million tons for 1988/89, are projected to decline from 1987/88 by 16 million tons overall, again assuming recovery of food production in South Asia.

Additional cereal needs to support consumption, stocks adjustments, and maximum absorbable cereal needs

Region		Status quo		Nutrition-based		Maximum ^{1/}
		Consumption	Consumption + stocks	Consumption	Consumption + stocks	
----- Thousand tons (cereal equivalent) ^{2/} -----						
1984/85	Total	11,745	13,450	25,767	27,472	3/
1985/86	Total	8,811	9,503	20,253	21,036	15,014
1986/87 ^{4/}	Total	6,660	7,851	17,473	18,105	15,001
1987/88	Total	26,238	20,910	41,987	35,704	30,332
Africa		7,240	7,478	12,412	11,919	11,204
North Africa		1,981	2,466	0	0	2,466
Sub-Saharan Africa		5,259	5,012	12,412	11,919	8,738
West Africa		860	831	2,311	2,250	1,757
Central Africa		370	382	502	514	514
East Africa		2,520	2,777	6,342	6,582	4,780
Southern Africa		1,509	1,022	3,257	2,573	1,687
Middle East		686	743	481	538	743
Asia		17,813	12,160	27,936	21,979	17,289
South Asia		16,845	11,190	27,115	21,157	16,319
Southeast Asia		968	970	821	822	970
Latin America		499	529	1,158	1,268	1,096
Caribbean		87	93	61	66	93
Central America		220	244	469	517	457
South America		192	192	628	685	546
1988/89	Total	9,953	11,026	25,640	27,594	18,572
Africa		5,881	6,692	11,784	12,543	10,763
North Africa		1,534	1,603	0	0	1,603
Sub-Saharan Africa		4,347	5,089	11,784	12,543	9,160
West Africa		466	702	1,952	2,205	1,592
Central Africa		371	380	506	515	515
East Africa		2,539	2,615	6,453	6,529	4,697
Southern Africa		971	1,392	2,873	3,294	2,356
Middle East		623	637	415	429	637
Asia		2,786	2,958	11,979	13,078	5,813
South Asia		1,782	1,946	11,081	12,171	4,801
Southeast Asia		1,004	1,012	898	907	1,012
Latin America		663	739	1,462	1,545	1,359
Caribbean		87	87	64	64	87
Central America		220	225	461	473	411
South America		356	427	937	1,007	861

1 / Imports consistent with maximum recent levels of consumption and food stocks.

2 / Major cereals, and the cereal equivalent of shortfalls in roots and tubers.

3 / Maximum absorbable needs not computed in 1984/85.

4 / Final 1986/87 assessment, May 1987 World Food Needs and Availabilities report.

CEREALS AVAILABILITIES AND OUTLOOK

While overall cereals availability has not changed significantly since July, the forecast for world rice production in 1987/88 is down more than 20 million to 302 million tons, 4 percent below 1986/87. Foreign production is expected to be down 14 million tons because of generally poor monsoon rains in South and Southeast Asia. Weather and disease problems have also affected the U.S. crop which may be down 6 percent from a year ago.

The world price has soared in recent months. Nominal Thai f.o.b. prices for 100B rice, which are representative of world price levels, rose 36 percent between July and October to \$267/ton, compared to \$181/ton a year ago. Shortfalls in Thailand and Pakistan, together with decreased U.S. production and stocks, will reduce export availabilities. World rice trade is forecast to decline to 10.2 million tons in 1988, 16 percent below the 1987 forecast and the lowest since 1978. Food aid budgets have not yet taken these higher prices into account. Both the need and the cost of rice aid will rise in 1988.

FOOD AID AVAILABILITIES AND OUTLOOK

The Food and Agriculture Organization estimates that cereal aid shipments in the July 1987-June 1988 trade year will decline about 5 percent to about 11.2 million tons. If achieved, this will be the fourth consecutive year in which the 1974 World Food Conference target of 10 million tons of food aid will be exceeded. This would also be the first year in which the aid share of world grain trade declined since 1980/81. Cereal aid as a percent of world grain trade is expected to reach nearly 6 percent in 1987/88, down from almost 6.5 percent the previous year. Food aid as a proportion of total cereal imports by low-income, food-deficit countries is estimated to fall from close to 25 percent to slightly less than 20 percent. The top three cereal donors remain the United States, the European Community (EC), and Canada.

In the United States, P.L. 480 Title I/III allocations were announced recently. Bangladesh, Egypt, and Pakistan are top recipients. The fiscal year 1988 P.L. 480 program level has yet to be determined by Congress.

The EC announced in July new country allocations under its 1987 food aid program. About 300,000 tons of cereals, in addition to much lesser amounts of beans, butteroil, powdered milk, sugar, and vegetable oil were allocated. Bangladesh was the principal recipient of cereals, followed distantly by Mozambique and about 10 other countries. The EC has pursued its policy of helping countries with grain surpluses by substituting cash subsidies for food aid. This policy was introduced in 1984 to "avoid punishing beneficiary countries which improve their food output." In 1986, about 10 million European Currency Units (approximately \$9.8 million) were provided instead of 71,000 tons of grain. Most of the funds were used to purchase and store surplus grain.

At the end of June, pledges by 72 donor nations to the regular resources of the World Food Program for the current 1987-88 biennium were slightly more than 70 percent of the \$1.4-billion target. For the 1985-86 biennium, 101 donors pledged more than 80 percent of the \$1.35-billion target.

As of early August, contributions to the 1987 International Emergency Food Reserve totaled close to 600,000 tons of cereals and almost 40,000 tons of non-cereals. This compares to 1986 contributions of almost 490,000 tons of cereal and slightly more than 30,000 tons of non-cereals.

ADDITIONAL FOOD NEEDS OF LOW-INCOME COUNTRIES

Measures of Additional Food Needs--Conceptual Framework

The financial indicators noted above and the food data described below are used to generate two alternative measures of food needs in addition to estimated commercial import capacity. Countries must choose between making extraordinary commercial purchases and seeking food aid to fill this gap. However, extraordinarily large commercial imports, particularly in successive years, would be at the cost of other imports, including imports of development goods. In addition, a measure is computed of the maximum quantities of commodities which countries could feasibly import. Each measure highlights a different aspect of the food problem in the low-income countries and a different notion of the role aid might play in easing the problem. For a more detailed discussion, see the section entitled "Methodological Notes."

The first measure, termed "status quo," estimates the additional food needed to maintain per capita use of food staples at levels reported in recent years. Per capita food use is calculated as the mean of the most recent 4 years that do not deviate more than one standard deviation from the mean of the most recent 8 years. This per capita food use is called base-use in the following descriptions of tables and elsewhere in this report. The data years employed in calculations for this report are 1979/80 through 1986/87. No provision is made for improving substandard diets, for reducing allocations to countries where diets are relatively good, or for correcting problems related to the uneven distribution of food across or within countries. Because status quo estimates support a level of per capita availability that has been achieved in the past, in most cases they can be considered to be consistent with the capacity of countries to absorb food imports.

The second measure, termed "nutrition-based," estimates the additional food required to raise per capita caloric intake to the levels associated with FAO's recommended minimum diet. This measure is based on the notion that food aid might be utilized in a way consistent with nutritional need rather than to maintain a recent, possibly substandard, status quo. In this sense, the nutrition-based measure might be viewed as a maximum level of additional food need, but not necessarily consistent with a country's ability to absorb food imports.

The measure of food import feasibility called "maximum absorbable imports" provides one basis for assessing what maximum quantity of additional food might be imported toward meeting large nutrition-based food needs, or possibly for building stocks in a period of ample world food supplies. The implicit assumption is that the food delivery systems of many of the countries involved have been fully "loaded" by past high levels of consumption. In addition, the highest level of stocks maintained over the previous 8 years is assumed, in the absence of better information, to be the largest level that can currently be maintained. The estimate is intended to provide a crude measure of the amount of food that can be physically absorbed. This level may then be used to scale back nutrition-based additional food need estimates that may be beyond the physical limits of a country's transportation, distribution, and storage capabilities.

While the status quo and nutrition-based methods differ in the estimation of requirements, they have a common structure. In each, an estimate of every country's domestic supplies of food staples is subtracted from an estimate of staple food requirements to arrive at a quantity estimate of import requirements. Import requirements are then totaled for food groups, based on assumptions regarding their substitutability. An estimate of a country's capacity to commercially import food in each category is then subtracted from the import requirement to arrive at an estimate of additional food needs. Estimated import unit values for each food group are used to generate import requirements, and additional food needs estimates in both quantity and value terms.

Several factors affecting additional food needs in a country are not addressed in these estimates. First, food distribution problems--both geographical and across income or population groups--are overlooked by the use of national level food availability and country average food requirement measures. These can mask acute shortages in specific places within a country as well as uneven distribution of food across population groups. However, measuring the unevenness of food distribution is extremely difficult, because data are not available. Acute problems of this nature are treated qualitatively in the country narratives.

Second, additional food needs are estimated without reference to a country's food and agriculture policies and current performance. Although these issues figure importantly in a country's choice between exceptional commercial food purchases and requesting concessional food imports, a comprehensive consideration of them is beyond the scope of this report.

Introduction to Regional and Country Narrative Tables

The following section reports on the food and financial situation and outlook for 69 countries in Africa, the Middle East, Asia, and Latin America. The materials summarize events during the 1986/87 local marketing year (generally July-June) and project food and financial conditions for 1987/88 and 1988/89.

Data shown in the tables must be interpreted with caution. Forecasts of food production, population, and financial conditions for 1987/88 and 1988/89 represent ERS's forecasts of what is likely to happen during those years. But, 1987/88 and 1988/89 estimates of all other items--stocks, use, import requirements, and additional needs--are not forecasts of what is likely to happen; they are estimates derived using the status quo and nutrition assumptions summarized in the previous section, and explained in detail in the "Methodological Notes" section of this report. Additional food needs calculations are also subject to a number of adjustments detailed in the Methodology section.

In each of the regional and country tables, any quantity less than 500 tons and any value less than \$500,000 is shown as zero.

Tables entitled "[Region] basic food data"

These tables provide major cereal supply and utilization data and population for regions for 1980/81-1986/87 and for forecast years (1987/88-1988/89).

Tables entitled "[Region] cereal use, additional food needs to support consumption, and stock adjustment"

These tables deal only with 1987/88-1988/89 country estimates aggregated for the regions. The explanation for column headings is the same as for column headings in the country tables, as described below.

Tables Entitled "[Country] basic food data"

These tables provide food staple supply and utilization data for 1980/81-1986/87 and for forecast years (1987/88 and 1988/89). An explanation of each column heading follows:

1. Actual or forecast production--actual production for the individual staples for 1980/81-1986/87 and forecast production for 1987/88 and 1988/89.
2. Net imports--actual net imports during 1980/81-1986/87. Net import figures for forecast years are not supplied. Instead, estimated import requirements based on status quo and nutrition-based approaches are provided in the next set of tables.
3. Nonfeed use, 1980/81-1986/87.
4. Feed use--actual feed use, 1980/81-1985/86 and targeted feed use for 1987/88 and 1988/89. Targeted feed use is calculated to maintain per capita feed use at base-use levels. The same base-use level of feed use is employed in the status quo and nutrition-based estimates of aid needs.
5. Beginning stocks--actual stocks for 1980/81-1986/87, where reliable stocks data are available. Initial calculations of status quo and nutrition-based import and aid needs are done by maintaining the ending stocks for 1986/87 (beginning stocks 1987/88) constant throughout the forecasting period. Import requirements for building food security stocks are calculated subsequently for the countries for which stock data are available.
6. Per capita total use--actual per capita human consumption and livestock feed use for 1980/81-1986/87.
7. Commodity coverage--the food staples included for each country.
8. Share of diet--each staple's share of total daily caloric intake, and the share of total daily caloric intake covered by the food staples analyzed. Data are drawn from the 1979-81 FAO Food Balance Sheets with adjustments made in some cases for differences in FAO or ERS estimates of feed use or more recent significant changes in a staple's share of the diet.

Tables Entitled "Import requirements for [Country]"

These tables deal only with 1987/88 and 1988/89 estimates. An explanation of each column heading follows:

1. Forecast domestic production--data are drawn from the "basic food data" tables.
2. Total use, status quo--total amount of a staple needed to maintain per capita human consumption at the base-use level and feed use at the targeted level.
3. Total use, nutrition-based--the amount of a staple needed to support FAO recommended minimum daily per capita caloric intake levels and targeted feed use.
4. Import requirements, quantity, status quo--the imports of a staple required to maintain per capita consumption, and also to achieve the targeted levels of feed use with no change in stocks, as shown in the basic food data table. These estimates are calculated for each staple by subtracting forecast domestic production from status quo-based total use.

Subtotals for each commodity group are calculated by summing the import requirements for individual commodities. Calculated surpluses (negative import requirements) for individual commodities within groups are subtracted from deficits in other commodities because foods are assumed to be substitutable within groups. Noncereals such as roots and tubers are converted to caloric wheat equivalents before being summed. Negative subtotals are shown as zeros because these calculated surpluses are assumed not to be substitutable elsewhere in the diet.
5. Import requirements, quantity, nutrition-based--the imports of a staple required to support recommended minimum per capita caloric intake, and targeted feed use, as no change in stocks is shown in the basic food data tables. These estimates are calculated by subtracting forecast domestic production from nutrition-based total use. Totals for each commodity group by year are computed as described in (4) above.
6. Import requirements, maximum--the largest quantity that could be managed if countries wished to take the greatest advantage of low grain prices to improve stocks or to improve on the nutritional status of the population.

Tables Entitled "Financial indicators for [Country], actual and projected"

These tables give historical data and forecasts for four key financial indicators: year-end international reserves, merchandise exports, merchandise imports, and debt-service obligations. All data are on a calendar year basis and are compiled from a variety of sources, including the World Bank, the International Monetary Fund, Chase Econometrics, country sources, and ERS estimates.

Tables Entitled "Additional food needs for [Country], with stock adjustment and as constrained by maximum absorbable imports"

These tables provide calculations of cereal import requirements and food needs in excess of normal commercial imports resulting from consumption requirements and from estimates of cereal stock adjustments required for food security purposes. The estimated stock increment (quantity and value) is added to import requirements and additional food needs to support consumption to arrive at total import requirements and additional food needs. The stock increment is shown only when it results in altered total additional food needs (i.e. when not offset by negative additional food needs for consumption). For a discussion of how stock increment estimates are calculated, see "Methodological Notes".

1. Commercial import capacity--an estimate of the amount of food within each group that a country can afford to import commercially without reducing below historical levels the share of its available foreign exchange used for nonfood imports. Countries are assumed in forecast years to spend the same proportion of available foreign exchange on commercial food imports as in the base period. The measure is sensitive to historical and projected levels of foreign exchange holdings, total merchandise imports and exports, and debt service. The measure is provided in both quantity and value, using the same country-specific estimates of unit import costs as in the import requirements estimate.
2. Additional food needs, quantity--the estimated quantity of additional food needed in each commodity group to support either the status quo or nutrition-based use level and targeted stock and feed use levels. Negative needs are shown as zero.
3. Additional food needs, value--the estimated value of the additional food needed in each commodity group to maintain either status quo consumption or nutrition-based consumption and targeted stock and feed use levels.

Africa

North Africa

North Africa basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- <u>1,000 tons</u> -----			<u>Thousand</u>	<u>Kilos</u>
Major cereals					
1980/81	12,893	3,336	9,303	69,169	322
1981/82	10,679	3,257	11,091	71,074	311
1982/83	13,734	2,953	9,351	73,508	321
1983/84	12,262	2,435	11,821	75,502	319
1984/85	12,470	2,459	12,770	77,546	324
1985/86	14,481	2,582	11,810	79,674	326
1986/87	15,473	2,865	12,439	81,915	326
1987/88	14,524	4,065		83,918	
1988/89	15,856	4,065		86,078	

The absence of a column entry in any table means such entry is inapplicable.

North Africa cereal use, additional food needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition- based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent Consumption						
1987/88	26,863	23,626	1,981	308	0	0
1988/89	27,558	24,393	1,534	228	0	0
Stock adjustment						
1987/88			489	76	0	0
1988/89			69	10	0	0
Total						
1987/88			2,466	383	0	0
1988/89			1,603	238	0	0

Egypt

Total grain production is expected to rise 7 percent in 1987/88 to 8.9 million tons. A surprising 27 percent rise in wheat production to 2.44 million tons occurred in 1987 because of an increase in the area planted in recently developed desert areas, good yields from improved varieties, and greater fertilizer use. The 1987 increase was far above the 1986 production gain of 4 percent. In addition to gains for wheat, greater use of hybrid seed should push corn production to over 4 million tons, compared with 3.9 million in 1986. However, difficulty in expanding rice area because of competition with cotton is likely to prevent further gains in rice output in 1987, following substantial gains in 1986. Egypt's overall agricultural output increased 4 percent in 1986, and the gain for 1987 is expected to be even higher.

Egypt's status quo cereal import requirements in 1987/88 are estimated at nearly 9 million tons. Nutrition-based import needs are estimated to be lower at about 6 million tons, indicating that recent average consumption levels have been above what is needed to achieve the FAO/WHO recommended minimum level of caloric intake.

Egypt's balance of payments is expected to improve somewhat in 1987 as income from petroleum exports, remittances, and tourism rebounded. Higher petroleum prices and larger exports to Europe will cause revenues from petroleum and products to increase to about \$2.3 billion in 1987, more than 60 percent above that of 1986. However, the trade deficit will remain large, and additional foreign borrowing has been necessary to enable imports of essential commodities and prevent a serious decline in the standard of living. Lower world grain prices, the availability of U.S. programs for food imports, and curbs on imports of luxury items will help to hold down the cost of farm imports in 1987. GSM 102 financing and EEP related price reductions were provided for about 1 million tons of wheat and 600,000 tons of wheat flour in fiscal 1987, in addition to Commodity Import Program grants for about \$40 million in corn.

Despite import assistance and debt rescheduling arrangements, Egypt's debt service payments have been rising sharply in 1987. Although many payments to governments and international agencies are being rescheduled, payments on commercial debt have increased. Total debt repayments for 1987 are estimated at \$3.6 billion, excluding military debt, with much of the debt being serviced through new borrowings from the United States and international agencies. Egypt's total outstanding foreign debt rose to a record \$43 billion in 1987, and the Central Bank of Egypt implemented a number of measures to slow down foreign exchange expenditures. The declining purchasing power of the Egyptian pound, from 75 U.S. cents in January to less than 50 cents by September 1987, contributed to a higher inflation rate of 19 percent in 1987, compared with 17 percent in 1986.

Principally because of rising debt obligations, Egypt's capacity to import cereals commercially during 1987/88 is estimated to drop to about \$1 billion, or about 6.7 million tons. Status quo additional cereal needs to support consumption are estimated at nearly 2 million tons. Nutrition-based additional cereal needs are estimated at zero, indicating that available commercial import capacity is sufficient to meet minimum recommended nutritional requirements.

Egypt basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
			<u>1,000 tons</u>			<u>Kilos</u>		<u>Percent</u>
Major cereals								
1980/81	7,373	2,545	6,267	11,408	2,357	327	Wheat	36.9
1981/82	7,424	2,420	7,294	12,072	2,964	347	Rice	10.0
1982/83	7,714	2,102	6,267	11,857	3,119	332	Corn	16.0
1983/84	7,883	1,857	7,294	12,207	3,684	342	Sorghum	1.1
1984/85	7,788	2,091	9,018	12,684	4,092	351	Barley	0.2
1985/86	7,818	2,121	8,768	12,909	3,838	341	Total	64.2
1986/87	8,270	1,960	9,012	12,958	4,242	340		
1987/88	8,909	2,042						
1988/89	9,185	2,042						

Import requirements for Egypt

Commodity/year	Production	Total use		Import requirements			
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum absorbable	
Major cereals	----- <u>1,000 tons</u> -----						
	1987/88	8,909	17,597	14,848	8,688	5,939	9,833
	1988/89	9,185	18,078	15,256	8,893	6,071	10,055

Financial indicators for Egypt, actual and projected

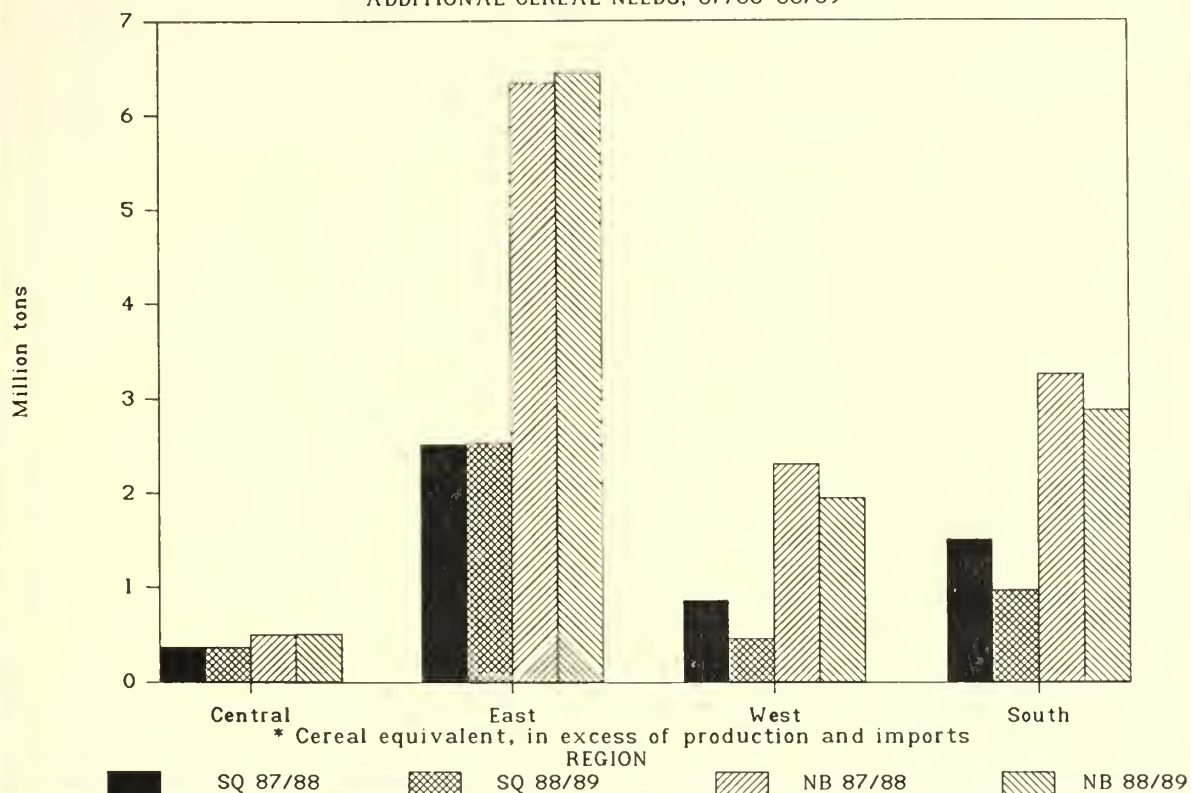
Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	----- <u>Million dollars</u> -----				<u>Percent</u>	
1980	9,307	9,745	1,411	1,046	7,896	15
1981	10,449	12,054	1,911	716	8,538	21
1982	10,091	12,385	1,905	698	8,187	20
1983	11,250	13,610	1,999	771	9,251	17
1984	12,237	14,451	2,352	736	9,885	20
1985	11,157	13,913	2,556	792	8,601	22
1986	10,000	13,850	3,300	792	6,700	
1987	10,900	14,700	3,600	792	7,278	19
1988	11,300	15,500	3,600	792	7,634	19

Additional food needs to support consumption for Egypt, with stock adjustment

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
----- <u>1,000 tons</u> <u>Million \$</u> -----						
Cereal equivalent Consumption						
1987/88	6,711	1,042	1,977	307	0	0
1988/89	7,359	1,093	1,534	228	0	0
Stock adjustment						
1987/88			489	76	0	0
1988/89			69	10	0	0
Total						
1987/88			2,466	383	0	0
1988/89			1,603	238	0	0

SUB-SAHARAN AFRICA

ADDITIONAL CEREAL NEEDS, 87/88-88/89



West Africa

West Africa basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- 1,000 tons -----			Thousand	Kilos
Major cereals					
1980/81	8,106	506	2,081	68,457	150
1981/82	8,676	451	2,099	70,086	152
1982/83	8,240	590	2,282	71,901	148
1983/84	7,571	436	2,650	74,333	137
1984/85	7,343	442	2,611	76,774	130
1985/86	10,173	393	2,042	78,962	150
1986/87	10,381	789	1,965	81,408	151
1987/88	9,711	854		83,770	
1988/89	10,475	854		86,145	

West Africa cereal use, additional food needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition-based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
Cereal equivalent	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Consumption						
1987/88	17,002	18,877	860	144	2,311	408
1988/89	17,494	19,528	466	77	1,952	336
Stock adjustment						
1987/88			(24)	(3)	(16)	(2)
1988/89			237	35	253	37
Total						
1987/88			831	140	2,250	398
1988/89			702	112	2,205	373
Maximum absorbable						
Cereal equivalent						
1987/88			831	140	1,757	306
1988/89			702	112	1,592	267

Chad

Harvest prospects in Chad vary from good in the south to poor in the north. Grain production is estimated about 100,000 tons below last year's good harvest. Yields will decline in the north and center, while area planted dropped in the south. Factors contributing to lower area are abundant grain stocks, low prices, and increased cotton plantings. Chad's cereal gap of 94,000 tons can be partially met by drawing down stocks estimated at 55,000 tons. (This includes some on-farm and privately held stocks.) While the country will be close to self-sufficient in coarse grains, these grains will need to be moved from surplus to deficit areas. Pastures in the north are less abundant this year, and herders have already started moving their animals south.

Chad basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
Major cereals	----- 1,000 tons -----					Kilos	Percent	
1980/81	647	0	32	679	0	153	Wheat	1.4
1981/82	548	0	62	610	0	134	Rice	3.8
1982/83	466	0	53	519	0	109	Corn	1.1
1983/84	490	0	89	529	0	107	Millet	47.8
1984/85	300	50	141	466	0	92	Cassava	6.9
1985/86	682	25	65	712	0	141	Total	61.0
1986/87	696	60	55	756	0	145		
1987/88	593	55						
1988/89	650	55						
Roots								
1980/81	185	0	0	185	0	42		
1981/82	191	0	0	191	0	42		
1982/83	197	0	0	197	0	41		
1983/84	200	0	0	200	0	41		
1984/85	170	0	0	170	0	34		
1985/86	200	0	0	200	0	40		
1986/87	205	0	0	205	0	39		
1987/88	205	0						
1988/89	210	0						

Import requirements for Chad

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum absorbable
	----- <u>1,000 tons</u> -----					
Major cereals						
1987/88	593	682	931	89	338	243
1988/89	650	699	959	49	309	207
Roots						
1987/88	205	218	319	13	114	24
1988/89	210	224	327	14	117	24
Cereal equivalent						
1987/88	675	769	1,059	94	383	252
1988/89	734	789	1,091	55	356	216

Financial indicators for Chad, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	----- <u>Million dollars</u> -----				<u>Percent</u>	
1980	71	55	2	5	69	4
1981	83	81	3	7	80	9
1982	58	82	0	12	58	6
1983	78	99	1	28	78	3
1984	110	128	3	44	107	1
1985	88	166	8	33	80	8
1986	96	210	10	16	87	
1987	90	200	3	16	63	4
1988	95	210	3	16	66	4

Additional food needs to support consumption for Chad, with stock adjustment

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent Consumption						
1987/88	3	1	91	16	380	68
1988/89	3	1	51	9	353	60
Stock adjustment						
1987/88			(5)	(1)	(5)	(1)
1988/89			1	0	1	0
Total						
1987/88			86	15	376	67
1988/89			52	9	354	61
Maximum absorbable						
Cereal equivalent						
1987/88			86	15	244	44
1988/89			52	9	214	37

Mali

The 1987 cereal harvest in Mali is expected to be slightly lower than last year's record. The current estimate is 55,000 tons below the one made in the July report. While rainfall was near normal for most of the country, crops were stressed in the northern regions of Mopti, Tomboctou, and Gao. The cereal gap is estimated at about 200,000 tons which can be met with commercial imports and stock draw-down. Following good harvests in 1985 and 1986, stocks are estimated at over 100,000 tons. This is confirmed by FAO reports of an exportable coarse grain surplus of 100,000 tons, and data which indicate that market prices of grain in July 1987 were below those of a year earlier. As usual in Mali, grain will have to be moved from surplus to deficit regions.

Mali basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
	<u>1,000 tons</u>					<u>Kilos</u>	<u>Percent</u>	
Major cereals								
1980/81	838	100	98	1,036	0	150	Wheat	1.6
1981/82	1,059	0	145	1,154	0	163	Rice	11.1
1982/83	975	50	178	1,178	0	163	Corn	4.6
1983/84	832	25	324	1,096	0	148	Millet and	
1984/85	664	85	283	962	0	127	sorghum	53.0
1985/86	1,125	70	145	1,245	0	161	Total	70.4
1986/87	1,151	95	85	1,221	0	155		
1987/88	1,057	110						
1988/89	1,117	110						

Import requirements for Mali

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition- based	Status quo	Nutrition- based	Maximum absorbable
	<u>1,000 tons</u>					
Major cereals						
1987/88	1,057	1,266	1,688	209	631	356
1988/89	1,117	1,295	1,732	178	615	328

Financial indicators for Mali, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	<u>Million dollars</u>				<u>Percent</u>	
1980	205	308	10	15	195	21
1981	154	269	10	17	145	22
1982	145	234	9	17	136	30
1983	165	246	14	16	151	32
1984	194	256	20	27	174	30
1985	181	294	38	23	144	9
1986	191	304	60	23	131	
1987	180	300	21	13	148	24
1988	190	310	22	13	156	24

Additional food needs to support consumption for Mali, with stock adjustment

Import requirements for Niger

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum absorbable
	----- <u>1,000 tons</u> -----					
Major cereals						
1987/88	1,637	1,983	2,119	346	482	646
1988/89	1,944	2,053	2,268	109	324	417

Financial indicators for Niger, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	----- <u>Million dollars</u> -----				<u>Percent</u>	
1980	576	677	39	126	537	7
1981	485	592	63	105	422	17
1982	381	515	111	30	270	9
1983	371	383	73	53	298	6
1984	304	279	67	89	237	6
1985	252	355	67	136	185	2
1986	330	364	91	189	240	
1987	325	350	79	189	316	5
1988	330	360	80	189	317	5

Additional food needs to support consumption for Niger, with stock adjustment

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent Consumption						
1987/88	40	6	306	47	442	67
1988/89	42	6	67	10	282	41
Stock adjustment						
1987/88			(73)	(11)	(73)	(11)
1988/89			231	34	231	34
Total						
1987/88			234	36	369	56
1988/89			298	43	513	75
Maximum absorbable						
Cereal equivalent						
1987/88			234	36	369	56
1988/89			298	43	417	61

Senegal

Senegal's additional food needs have increased to 34,000 tons (excluding the stock adjustment) from the 5,000 tons reported in July. This increase was due to a reduction in commercial import capacity caused by a lower estimate of export receipts. World prices for phosphates and peanut oil, two of Senegal's major foreign exchange earners, are expected to remain low into 1988. Senegal is not likely to reduce expenditures on imports in the short run. This is

especially true given the sharp rise in world rice prices during recent months. By early 1988, Senegal could be paying double the 1986 price for a ton of rice. However, the impact of these higher prices on Senegal's food situation is difficult to assess. The retail rice price has been as high as 3 times the import price allowing the Government to earn substantial revenue from a tax on imports. Officials are unlikely to further increase in the retail price of rice, which has doubled since 1981.

Senegal basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
Major cereals	----- <u>1,000 tons</u> -----					<u>Kilos</u>	<u>Percent</u>	
1980/81	645	150	494	1,214	0	211	Wheat	6.3
1981/82	884	75	497	1,281	0	215	Rice	26.6
1982/83	730	175	558	1,338	0	218	Corn	4.3
1983/84	485	125	686	1,240	0	196	Millet	25.8
1984/85	660	55	537	1,164	0	178	Total	62.9
1985/86	1,195	88	468	1,547	0	229		
1986/87	837	204	480	1,397	0	200		
1987/88	830	124						
1988/89	890	124						

Import requirements for Senegal

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition- based	Status quo	Nutrition- based	Maximum absorbable
		<u>1,000 tons</u>				
Major cereals						
1987/88	830	1,496	1,506	666	676	902
1988/89	890	1,546	1,562	656	672	897

Financial indicators for Senegal, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	----- <u>Million dollars</u> -----				<u>Percent</u>	
1980	481	973	179	8	302	44
1981	511	1,009	90	9	422	33
1982	590	968	46	11	543	23
1983	569	880	57	12	512	27
1984	548	805	84	4	464	34
1985	481	790	89	5	392	28
1986	656	862	248	9	408	
1987	575	850	74	8	501	29
1988	600	875	77	8	523	29

Additional food needs to support consumption for Senegal, with stock adjustment

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent						
Consumption						
1987/88	632	94	34	5	44	7
1988/89	689	98	0	0	0	0
Stock adjustment						
1987/88			33	5	33	5
1988/89			0	0	0	0
Total						
1987/88			67	10	77	11
1988/89			0	0	0	0

Central Africa

Central Africa basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	<u>----- 1,000 tons -----</u>			<u>Thousand</u>	<u>Kilos</u>
Major cereals					
1980/81	1,232	59	766	37,842	53
1981/82	1,241	60	690	38,818	50
1982/83	1,258	58	715	40,044	49
1983/84	1,302	51	734	41,071	50
1984/85	1,343	17	766	42,091	50
1985/86	1,363	33	836	43,265	51
1986/87	1,387	40	848	44,453	50
1987/88	1,360	40		45,689	
1988/89	1,455	40		46,966	

Central Africa cereal use and additional food needs

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition- based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent						
Consumption						
1987/88	8,995	9,090	370	62	502	83
1988/89	9,247	9,344	371	59	506	80
Stock adjustment						
1987/88			12	2	12	2
1988/89			9	2	9	2
Total						
1987/88			382	64	514	85
1988/89			380	61	515	82

East Africa

East Africa basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- 1,000 tons -----			Thousand	Kilos
Major cereals					
1980/81	15,306	1,077	1,798	121,603	141
1981/82	16,831	1,037	1,659	125,707	144
1982/83	16,899	1,482	1,251	129,771	140
1983/84	15,671	1,460	1,838	133,559	138
1984/85	13,541	597	4,170	136,749	126
1985/86	18,823	1,060	2,291	142,212	141
1986/87	19,382	2,125	1,112	146,683	141
1987/88	17,890	1,937		151,469	
1988/89	18,511	1,937		156,417	

East Africa cereal use, additional food needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status	Nutrition-	Status quo		Nutrition-based	
	quo	based	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent						
Consumption						
1987/88	27,775	31,597	2,520	380	6,342	1,027
1988/89	28,695	32,622	2,539	361	6,453	998
Stock adjustment						
1987/88			257	37	240	35
1988/89			76	10	76	10
Total						
1987/88			2,777	417	6,582	1,062
1988/89			2,615	371	6,529	1,008
Maximum absorbable						
Cereal equivalent						
1987/88			2,777	417	4,780	762
1988/89			2,615	371	4,697	716

Ethiopia

Rains for Ethiopia's Meher (main season) crop, which accounts for about 90 percent of total food output, are essential in June through September for the November/December harvest. This year, the rains did not begin until August and even then were not plentiful. Early crops (corn and sorghum) were the hardest hit. Planting of late season crops (barley, teff and wheat) was difficult because of hardened ground. The drought is virtually contained to the northern and southern provinces (unlike the 1984-85 drought which was widespread).

The adverse weather conditions necessitated a reduction in the 1987/88 cereal production estimate from that of the July report. The current estimate is 5.2 million tons, about a 9 percent drop from the 1986/87 level.

A stock change was also incorporated into the model. Stocks for 1986/87 were drawn down from 450,000 tons to 174,000 tons (wheat and sorghum). It should be noted that these stocks are strictly government holdings. The amount of on-farm stocks is not known and, although significant because of the good 1986/87 harvest, is not included in the total.

Status-quo import requirements for 1987/88 now stand at 1.6 million tons. With 9 percent of available foreign exchange allocated to food imports, commercial import capacity is 155,000 tons. Including an increase in stocks, additional food needs are 1.68 millions tons. When the model was run in consideration of a production disaster, 14 percent of foreign exchange was allocated to food imports. This increased commercial import capacity to 202,000 tons which in turn lowered additional food needs marginally to 1.63 million tons.

Each of these results appears high when it is recalled that deliveries for the 1984/85 drought totalled about one million tons. As mentioned above, on-farm stocks are available, but not included in these calculations. With production falling, it can be safely assumed that these stocks will be drawn down. If this were to occur, additional food needs most likely would be closer to one million tons.

Ethiopia basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
			<u>1,000 tons</u>			<u>Kilos</u>		<u>Percent</u>
Major cereals								
1980/81	5,559	695	226	5,847	213	155	Wheat	9.1
1981/82	5,324	420	303	5,745	172	147	Corn	15.3
1982/83	6,649	130	323	6,587	160	163	Barley	9.6
1983/84	5,749	355	531	6,363	187	156	Sorghum	15.9
1984/85	4,790	85	970	5,361	176	131	Millet	2.0
1985/86	5,245	308	1,075	6,056	122	141	Teff	15.5
1986/87	5,750	450	740	6,594	172	150	Total	67.6
1987/88	5,245	174						
1988/89	5,650	174						

Import requirements for Ethiopia

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition- based	Status quo	Nutrition- based	Maximum absorbable
			<u>1,000 tons</u>			
Major cereals						
1987/88	5,245	6,882	8,913	1,637	3,668	2,911
1988/89	5,650	7,081	9,192	1,431	3,542	2,727

Financial indicators for Ethiopia, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
					<u>Million dollars</u>	<u>Percent</u>
1980	573	871	34	75	539	7
1981	531	850	43	246	488	7
1982	579	915	55	178	525	4
1983	572	993	68	119	504	6
1984	627	1,090	84	41	543	7
1985	583	1,293	105	148	478	14
1986	650	1,300	171	251	479	
1987	675	1,300	89	251	681	9
1988	675	1,300	89	251	681	9

Additional food needs to support consumption for Ethiopia, with stock adjustment

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent Consumption						
1987/88	155	23	1,482	218	3,513	518
1988/89	162	23	1,269	179	3,380	477
Stock adjustment						
1987/88			195	29	195	29
1988/89			11	2	11	2
Total						
1987/88			1,677	247	3,708	547
1988/89			1,279	180	3,391	478
Maximum absorbable						
Cereal equivalent						
1987/88			1,677	247	2,911	429
1988/89			1,279	180	2,576	363

Sudan

Since the July report, estimates of Sudan's additional food needs have been lowered. This change resulted from updates received regarding the sorghum crop. Estimates of 1986/87 sorghum production are up slightly to 3.5 million tons. Ending stocks in both 1985/86 and 1986/87 were higher than originally thought; 1987/88 beginning stocks will be around 600,000 tons. These surpluses, however, are regional. Distribution problems persist in the southern areas because of continuing civil strife. Donor assistance is essential for purchasing and distributing these surpluses to the deficit areas. Projections of 1986/87 sorghum exports have been raised to 750,000 tons. This, in turn, resulted in an increase in the export earnings estimate to 600 million.

The factors noted above lowered import requirements and increased import capacity for 1987/88 compared to the July estimate. Additional food needs now stand at 407,000 tons.

Sudan basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
			<u>1,000 tons</u>			<u>Kilos</u>		<u>Percent</u>
Major cereals								
1980/81	2,816	190	146	2,688	210	152	Wheat	7.9
1981/82	3,981	254	175	3,452	318	192	Rice	0.3
1982/83	2,453	640	182	2,780	198	146	Corn	0.8
1983/84	2,327	297	451	2,863	197	146	Sorghum	33.2
1984/85	1,382	15	1,595	2,752	90	131	Millet	9.5
1985/86	4,275	150	560	4,098	117	184	Peanuts	11.9
1986/87	4,006	770	(6)	3,862	258	175	Total	63.7
1987/88	3,327	650						
1988/89	3,502	650						
Peanuts								
1980/81	707	50	(41)	706	0	37		
1981/82	838	10	(100)	698	0	35		
1982/83	492	50	(70)	442	0	22		
1983/84	413	30	(45)	388	0	18		
1984/85	386	10	0	386	0	18		
1985/86	274	10	0	274	0	12		
1986/87	399	10	0	399	0	17		
1987/88	450	10						
1988/89	450	10						

Import requirements for Sudan

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum absorbable
	----- <u>1,000 tons</u> -----					
Major cereals						
1987/88	3,327	3,950	4,034	623	707	1,446
1988/89	3,502	4,069	4,164	567	662	1,411
Peanuts						
1987/88	450	419	622	(31)	172	629
1988/89	450	432	633	(18)	183	660
Cereal equivalent						
1987/88	3,777	4,370	4,656	593	879	1,858
1988/89	3,952	4,501	4,796	549	844	1,848

Financial indicators for Sudan, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	----- <u>Million dollars</u> -----				<u>Percent</u>	
1980	689	1,127	104	49	585	1
1981	793	1,634	145	17	648	13
1982	401	750	115	21	286	32
1983	514	703	87	17	427	20
1984	519	600	107	17	412	17
1985	444	579	130	12	314	17
1986	536	850	899	20	(363)	
1987	600	850	143	20	456	18
1988	600	900	143	20	455	18

Additional food needs to support consumption for Sudan, with stock adjustment

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
----- <u>1,000 tons</u> ----- <u>Million \$</u> ----- <u>1,000 tons</u> ----- <u>Million \$</u> ----- <u>1,000 tons</u> ----- <u>Million \$</u> -----						
Cereal equivalent Consumption						
1987/88	164	22	429	57	715	94
1988/89	171	22	378	48	673	85
Stock adjustment						
1987/88			(22)	(3)	(22)	(3)
1988/89			19	2	19	2
Total						
1987/88			407	54	693	91
1988/89			397	50	693	87

Southern Africa

Southern Africa basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- <u>1,000 tons</u> -----			<u>Thousand</u>	<u>Kilos</u>
Major cereals					
1980/81	6,273	302	1,598	44,064	178
1981/82	7,853	317	1,249	45,326	178
1982/83	6,590	1,369	904	46,650	160
1983/84	5,562	1,381	1,108	48,082	158
1984/85	6,173	447	1,673	49,432	153
1985/86	8,265	729	1,099	50,876	159
1986/87	7,685	1,989	987	52,430	155
1987/88	5,925	2,538		54,045	
1988/89	6,671	2,538		55,721	

Southern Africa cereal use, additional food needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition- based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent						
Consumption						
1987/88	9,924	11,595	1,509	203	3,257	442
1988/89	10,236	12,058	971	128	2,873	376
Stock adjustment						
1987/88			(956)	(119)	(956)	(119)
1988/89			421	52	421	52
Total						
1987/88			1,022	144	2,573	358
1988/89			1,392	181	3,294	428
Maximum absorbable						
Cereal equivalent						
1987/88			1,022	144	1,687	232
1988/89			1,392	181	2,356	301

On regional tables, cereal equivalent consumption needs plus stock adjustments do not necessarily add to the total.

The Middle East

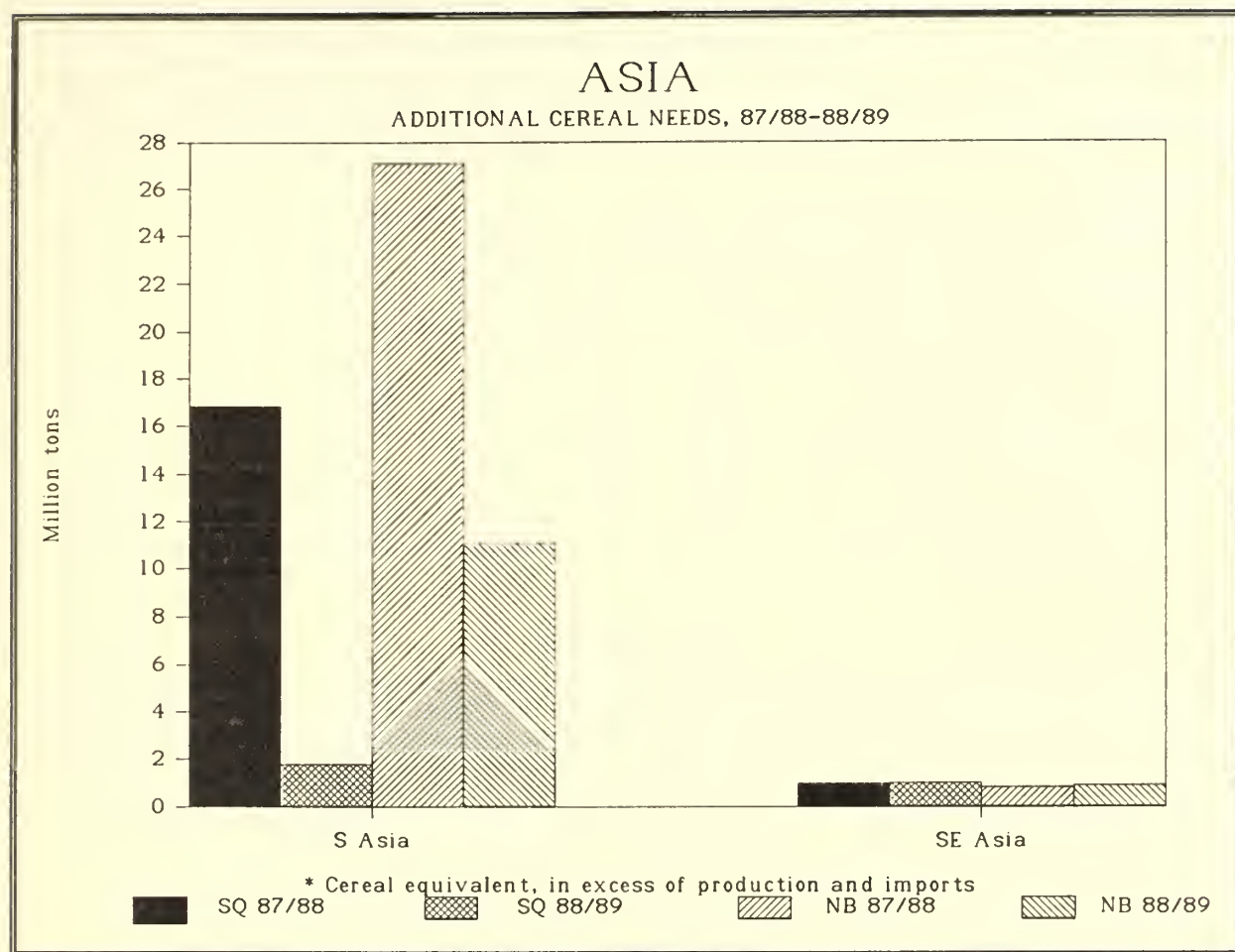
Middle East basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- <u>1,000 tons</u> -----			<u>Thousand</u>	<u>Kilos</u>
Major cereals					
1980/81	956	254	1,105	9,964	215
1981/82	945	170	1,323	10,135	223
1982/83	880	173	1,430	10,316	221
1983/84	488	203	1,447	10,514	192
1984/85	524	116	1,652	10,737	201
1985/86	733	131	1,710	11,001	222
1986/87	755	132	1,775	11,225	225
1987/88	769	132		11,225	
1988/89	791	132		11,454	

Middle East cereal use, additional food needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition- based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent						
Consumption						
1987/88	2,475	2,269	686	100	481	69
1988/89	2,524	2,316	623	86	415	56
Stock adjustment						
1987/88			57	9	57	9
1988/89			14	2	14	2
Total						
1987/88			743	109	538	78
1988/89			637	88	429	59

Asia



South Asia

South Asia basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- 1,000 tons -----			Thousand	Kilos
Major cereals					
1980/81	151,832	20,032	399	906,091	170
1981/82	159,740	17,926	3,158	926,031	174
1982/83	151,409	19,822	5,788	947,382	164
1983/84	178,294	21,280	5,050	969,559	182
1984/85	175,437	28,642	3,423	991,723	175
1985/86	175,052	33,551	2,144	1,013,376	176
1986/87	178,331	32,896	1,525	1,035,542	177
1987/88	157,643	28,951		1,058,007	
1988/89	184,080	28,951		1,080,714	

South Asia cereal use, additional food needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition-based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent Consumption						
1987/88	184,897	196,620	16,845	2,916	27,115	4,701
1988/89	189,185	203,715	1,782	264	11,081	1,805
Stock adjustment						
1987/88			(5,655)	(1,010)	(5,655)	(1,010)
1988/89			164	23	1,119	186
Total						
1987/88			11,190	1,906	21,157	3,644
1988/89			1,946	287	12,171	1,988
Maximum absorbable						
Cereal equivalent						
1987/88			11,190	1,906	16,319	2,806
1988/89			1,946	287	4,801	758

Bangladesh

Floods in late July have damaged the aus (July–August harvested) and aman (October–December harvested) rice crops, lowering Bangladesh's estimated 1987/88 rice output to 14.3 million tons, down about 11 percent from the earlier estimate. Wheat production (planted in November–December) continues to be expected to rebound to 1.4 million tons in 1987/88. Assuming average rainfall during the rest of the fall growing season, which usually accounts for half of the country's food grain production, 1987/88 food grain output is estimated at 15.7 million tons, nearly 10 percent below previous estimates and 5 percent below revised 1986/87 cereal production. Government wheat and rice stocks are providing immediate food relief, but the estimated July 1987 stock level of 709,000 tons was well below the informal target of 1.3 million tons. Estimated vegetable oil production, which supplies about 20–25 percent of domestic edible oil consumption, is unchanged at 59,000 tons.

Status quo cereal import requirements in 1987/88 are estimated to have nearly doubled to 3.6 million tons, while nutrition-based needs have risen 30 percent to 6.6 million tons. Largely as a result of the drop in food grain production, Bangladesh's capacity to absorb cereal imports is calculated to have increased from 2.8 million tons to 4.7 million tons in 1987/88. However, storage and inland transportation problems would likely occur if imports exceeded 3 million tons.

As a result of the floods, Bangladesh's GDP growth is likely to slow from an estimated 4.4 percent in 1986/87 to 1–2 percent in 1987/88. The trade deficit is projected to widen, reflecting flood-reduced output of the country's two key export commodities, jute and shrimp, and a rise in commercial food imports. Foreign reserves are estimated to drop slightly. Commercial food grain import capacity is estimated at \$133 million (869,000 tons), down 10 percent from the previous estimate. If Bangladesh were to match its highest historical allocation of available foreign exchange to food imports, commercial import capacity would be about \$279 million (1.8 million tons). However, this level may severely strain the country's limited resources and curb imports of development goods, particularly after the abnormally large commercial purchases of food grains in 1984/85. Payments on commercial debt incurred in those purchases continue to strain the country's fragile balance of payments situation.

Total status quo additional needs during 1987/88, calculated with commercial import capacity of \$133 million, are estimated at 2.6 million tons, including 2.4 million tons for consumption and 197,000 tons for stockbuilding. Using the higher commercial import capacity of \$279 million, status quo additional needs total 1.5 million tons, including 197,000 tons for stockbuilding. A need for stockbuilding is indicated because stocks are very low compared with both the food security target and historical stocks, and just maintaining, rather than building would lead to a

Assuming average weather and moderate gains in cereal production, both status quo and nutrition-based additional cereal needs are projected to decline in 1988/89. Status quo and nutrition-based additional edible oil needs through 1988/89 continue to be estimated at zero, primarily because lower world prices will allow adequate amounts to be purchased commercially.

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
	----- <u>1,000 tons</u> -----					<u>Kilos</u>	<u>Percent</u>	
Major cereals								
1980/81	14,975	787	1,077	15,587	0	177	Wheat	8.8
1981/82	14,598	1,252	1,235	16,470	0	182	Rice	76.3
1982/83	15,311	615	1,817	17,117	0	183	Vegetable	
1983/84	15,710	626	2,056	17,592	0	183	oils	2.2
1984/85	16,084	800	2,588	18,455	0	188	Total	87.3
1985/86	16,082	1,017	1,203	17,326	0	172		
1986/87	16,497	976	1,800	18,564	0	180		
1987/88	15,680	709						
1988/89	17,250	709						
Vegetable oils								
1980/81	56	18	125	146	0	2		
1981/82	54	53	133	189	0	2		
1982/83	55	51	116	159	0	2		
1983/84	57	63	133	174	0	2		
1984/85	57	79	206	209	0	2		
1985/86	56	133	280	317	0	3		
1986/87	54	152	150	245	0	2		
1987/88	59	111						
1988/89	60	111						

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition-based	Status quo	Nutrition-based	Maximum absorbable
	----- <u>1,000 tons</u> -----					
Major cereals						
1987/88	15,680	19,293	22,269	3,613	6,589	4,764
1988/89	17,250	19,766	22,964	2,516	5,714	3,682
Vegetable oils						
1987/88	59	212	210	153	151	315
1988/89	60	218	215	158	155	323

Financial indicators for Bangladesh, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	<div>----- <u>Million dollars</u> -----</div>				<u>Percent</u>	
1980	1,364	2,795	269	249	1,095	24
1981	1,298	2,818	214	122	1,084	11
1982	1,545	2,589	263	358	1,282	16
1983	1,717	2,665	280	539	1,437	16
1984	1,697	3,011	414	395	1,283	33
1985	1,666	2,741	467	475	1,199	14
1986	1,740	2,880	538	618	1,202	
1987	1,800	3,100	500	600	1,344	21
1988	1,950	3,300	550	625	1,433	21

Additional food needs to support consumption for Bangladesh, with stock adjustment and as constrained by maximum absorbable imports

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent Consumption						
1987/88	869	133	2,418	370	5,388	824
1988/89	969	142	1,171	171	4,362	638
Stock adjustment						
1987/88			197	30	197	30
1988/89			131	19	131	19
Total						
1987/88			2,615	400	5,585	854
1988/89			1,302	191	4,494	658
Vegetable oils						
1987/88	306	100	0	0	0	0
1988/89	326	106	0	0	0	0
Total						
1987/88		233		400		854
1988/89		248		191		658
Maximum absorbable						
Cereal equivalent						
1987/88			2,615	400	3,808	583
1988/89			1,302	191	2,510	367
Vegetable oils						
1987/88			0	0	0	0
1988/89			0	0	0	0
Total						
1987/88				400		583
1988/89				191		367

Commercial import capacity surplus to vegetable oil import requirements offsets some additional cereal needs.

India

Following what some observers consider to be the worst monsoon in recent decades, 1987/88 cereal production is estimated at 116.5 million tons, down 14 percent from last year. The bulk of the 1987/88 rice crop is now being harvested and is estimated at 47 million tons, the lowest since 1979/80, because of poor rainfall and inadequate supplies of irrigation water throughout

most of north, west, and south India. Harvests of coarse grains, primarily sorghum, millet, and corn, have now been affected by dry weather in key producing areas of central, east and south India for 3 consecutive years and are estimated at the lowest levels since the 1971/72 drought. The wheat and pulse crops harvested during April-May 1987 continue to be estimated at 46 million tons and 12.8 million tons, respectively, both down marginally from 1986. However, there are now strong indications that roughly 3 million tons of wheat were lost because of heavy post harvest rains.

The outlook for spring 1988 harvests of wheat and pulses, most of which will be planted in November 1987, is clouded by poor soil moisture conditions and, reportedly, low reservoir levels in northern India. A major setback in the 1988 wheat crop is considered unlikely at this time because the bulk of wheat area is irrigated and, historically, the crop has shown a great deal of resiliance to poor weather. However, persistent dry weather during October-March could result in a substantial drop in production. Production of pulses, which are grown on unirrigated land, is projected to fall about 15 percent because of poor soil moisture conditions, and could be substantially lower in the absence of winter rains.

Government stocks of wheat and rice were officially estimated at 23.4 million tons on July 1, 1987. Stocks were above the target of 21 million, but well below the earlier estimate of about 27 million, apparently because of heavy losses of procured wheat from post harvest rains. Despite the steadily worsening harvest outlook, the Government has maintained stable food grain prices through larger wheat and rice allocations to the Public Distribution System (PDS). More food grain is also being distributed in rural areas through food-for-work type programs. Stocks of coarse grains, not held in large quantities by the Government and not included in the stock target, are normally in the 1-2 million ton range but fell to roughly 500,000 by July 1987. Low stocks of coarse grains may limit the government's ability to meet food needs in some drought-hit areas where they are the preferred food grain staple.

The oilseed crop, which is grown primarily on rainfed land, is also estimated to drop sharply in 1987/88 as a result of the drought. Production of peanuts, the major oilseed, has been particularly hard hit and is expected to drop to the lowest level since 1972/73. The dryness in northern India has dimmed the outlook for the spring 1988 crop of rapeseed, the second major oilseed, although high price incentives could stimulate a large harvest if late rains replenish soil moisture. Output of edible oils, hampered by poor weather the last 2 years, is forecast to drop 7 percent in 1987/88. Prospects for a third consecutive poor oilseed crop contributed to a sharp increase in domestic oilseed and edible oil prices during the spring and summer of 1987. The price increase was curbed during September-October, following large increases in allocations of imported oils to the vanaspati (hydrogenated oil) industry and the PDS.

Status quo cereal import needs are now calculated at nearly 21 million tons for 1987/88, as the drought reduces production well below what would be needed to support recent levels of per capita consumption. Nutrition-based import requirements are estimated at more than 28 million tons, reflecting a substantial nutritional gap. Because of sharply below trend production, the stock adjustment procedure requires a stock drawdown to help meet the shortfall. The standard calculation requires that stocks be drawn down about 5.8 million tons to 18.1 million--or half the distance from the target (21 million) to the minimum level of stocks observed since 1978 (15.3 million in 1981). However, India's food security was not severely threatened with the level of stocks held in 1981, and stocks could probably be drawn down by a total of about 8 million tons without jeopardizing food security to about 15 million by July 1988. July 1 stocks below 15 million tons would threaten food security because pipeline supplies would be insufficient to meet distribution needs during the July-November peak demand period when there is little new procurement, and because of the need to hold minimal stocks in many different geographic regions.

Assuming a stock drawdown of 8 million tons, about 13 million tons of cereal imports would be needed to sustain status quo consumption in 1987/88, and about 20 million would be needed to achieve minimum recommended average caloric requirements. Current official USDA forecasts of actual cereal consumption and trade for 1987/88 indicate, however, that unless there is a large drop in 1988 wheat production, only relatively small amounts of corn are likely to be imported. As has been the case during major droughts in the past, it is likely that, despite large scale relief efforts, consumption will drop below that of recent years because of a sharp decline in consumer purchasing power.

Status quo edible oil import needs are now estimated at almost 1.8 million tons in 1987/88, up 50 percent from the previous estimate as a result of drought-reduced domestic production. The nutrition-based import needs estimate of about 1.5 million tons is probably too low because it does not account for recent gains in consumption. Also, because of recent gains in consumption, the status quo pulse import need calculation of 564,000 tons in 1987/88 may more accurately reflect needs than the lower nutrition-based estimate.

A tight balance of payments position has been a key area of concern for Indian policymakers in recent years. The situation is likely to worsen as the drought slows exports, boosts import needs, and places increased pressure on foreign exchange reserves and the debt profile. Growth in exports, already sluggish, is likely to be slowed by reduced supplies of a number of farm commodities, as well as setbacks in production of manufactures because of power shortages. The outlook for worker remittances, a key source of foreign exchange, remains weak because of slowed economic activity in the Middle East. Although weakened domestic demand will reduce imports of some items, the import bill will probably continue to rise because of higher oil prices and imports of drought relief supplies--assuming that recent import liberalization measures remain in effect. The trade deficit is currently projected to be sharply higher in 1987 and 1988, resulting in a decline in foreign reserves and a further increase in debt. Debt service obligations were expected to rise substantially even before the drought because of larger scheduled payments to the IMF and on commercial loans.

Because of the abnormal food import needs caused by the drought, India's capacity to import food commercially is calculated by allocating forecast foreign exchange availability to food imports based on the highest proportion that was spent on commercial imports since 1977--14.2 percent in 1984. Using this approach, total capacity to import cereals, edible oils, and pulses in 1987/88 is calculated at \$2.1 billion--sufficient to buy 4.3 million tons of cereals, 329,000 tons of pulses, and 3.4 million tons of edible oils based on the composition of imports in 1984. The high apparent capacity to import oils stems from record Indian imports of edible oils in 1984, a year when prices were roughly twice the level forecast for 1987/88. Using these import capacity estimates, allowing an 8 million ton drop in cereal stocks, and reallocating the excess estimated capacity to buy edible oils to cereals, status quo additional needs are estimated at 5.6 million tons of cereals and 235,000 tons of pulses. On the same basis, maximum absorbable nutrition-based additional needs are estimated at about 9.4 million tons of cereals.

Additional needs during 1988/89 will depend on the spring 1988 wheat and pulse harvests, as well as the 1988/89 crops of rice, coarse grain, and oilseeds. Current estimates indicate a drop in 1988/89 cereal and edible oil additional needs, assuming a recovery in 1988 fall harvests and no major damage to the 1988 wheat crop. However, pulse needs are projected to rise because of the anticipated drop in 1988 pulse production.

The balance of payments and the Government budget are probably capable of absorbing the foreign exchange and budgetary costs of the drought. However, the resulting increase in foreign debt obligations and large diversion of domestic resources from investment to food distribution and other drought relief measures, will likely yield a measurable setback to future growth. In particular, it is likely that acute balance of payments and budgetary pressures could necessitate a retreat from industrial deregulation and import liberalization measures that have been introduced in recent years. Donor assistance that reduces foreign exchange costs of both normal and drought-related imports, or helps maintain domestic development investment streams, could help minimize the future growth and welfare impacts of the drought. So far, the Government has indicated that it will permit imports of 1 million tons of corn and 1 million tons of oilseeds, both commodities that are not normally imported, as well as up to 2 million tons of edible oil. It has also indicated increased import needs for pulses and dairy products. These announcements indicate the types of commodity assistance the Government feels would be most useful.

India basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Nonfeed use	Feed use	Per capita total use	1979-81	
							Commodity coverage	Share of diet
	----- 1,000 tons -----					Kilos	Percent	
Major cereals								
1980/81	113,810	17,743	(835)	113,126	2,320	168	Wheat	18.5
1981/82	120,949	15,272	1,546	118,347	2,420	172	Rice	33.2
1982/83	112,446	17,000	3,477	112,409	2,420	160	Corn	3.1
1983/84	136,831	18,094	3,085	130,656	2,620	182	Sorghum	5.8
1984/85	135,261	24,734	(161)	127,317	2,620	173	Millet	5.2
1985/86	134,294	29,897	(605)	132,165	2,710	176	Barley	0.7
1986/87	134,837	28,711	(505)	136,283	2,860	178	Pulses	5.8
1987/88	116,500	23,900					Vegetable oil	6.3
1988/89	139,100	23,900					Total	78.7
Vegetable oils								
1980/81	2,668	180	1,293	3,981	0	6		
1981/82	3,392	160	962	4,434	0	6		
1982/83	2,974	80	1,259	4,163	0	6		
1983/84	3,376	150	1,697	4,833	0	7		
1984/85	3,775	390	1,377	5,182	0	7		
1985/86	3,370	360	1,185	4,625	0	6		
1986/87	3,374	290	1,540	4,804	0	6		
1987/88	3,127	400						
1988/89	3,700	400						
Pulses								
1980/81	8,572	0	173	8,595	150	13		
1981/82	10,627	0	128	10,605	150	15		
1982/83	11,507	0	150	11,507	150	16		
1983/84	11,857	0	300	12,057	100	17		
1984/85	12,893	0	200	12,993	100	17		
1985/86	11,962	0	300	12,212	50	16		
1986/87	12,963	0	300	13,213	50	17		
1987/88	12,800	0						
1988/89	10,800	0						

Import requirements for India

Commodity/year	Production	Total use		Import requirements		
		Status quo	Nutrition- based	Status quo	Nutrition- based	Maximum absorbable
	<u>1,000 tons</u>					
Major cereals						
1987/88	116,500	137,469	144,716	20,969	28,216	34,402
1988/89	139,100	140,301	150,010	1,201	10,910	14,787
Vegetable oils						
1987/88	3,127	4,920	4,700	1,793	1,573	2,385
1988/89	3,700	5,021	4,820	1,321	1,120	1,925
Pulses						
1987/88	12,800	13,364	12,992	564	192	1,973
1988/89	10,800	13,640	13,018	2,840	2,218	4,277

Financial indicators for India, actual and projected

Year	Exports and other credits	Imports and other debits	Debt service	International reserves	Foreign exchange available	
					Total	Share to major food imports
	----- <u>Million dollars</u> -----				<u>Percent</u>	
1980	15,150	17,977	1,292	6,858	13,858	5
1981	14,485	17,682	1,377	4,461	13,108	7
1982	14,323	17,236	1,629	4,965	12,694	6
1983	14,983	17,742	2,093	5,847	12,890	11
1984	15,227	18,324	2,335	6,110	12,892	14
1985	15,655	20,920	2,974	6,657	12,681	8
1986	17,123	21,099	3,761	6,729	13,362	
1987	17,600	22,900	4,000	6,300	12,468	15
1988	19,200	24,500	4,350	6,100	12,998	11

Additional food needs to support consumption for India, with stock adjustment and as constrained by maximum absorbable imports

Commodity/year	Commercial import capacity		Status quo		Nutrition-based	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent Consumption						
1987/88	4,297	767	13,535	2,415	20,035	3,575
1988/89	2,460	420	0	0	5,608	957
Stock adjustment						
1987/88			(5,764)	(1,028)	(5,764)	(1,028)
1988/89			0	0	955	163
Total						
1987/88			7,771	1,386	14,271	2,546
1988/89			0	0	6,563	1,120
Vegetable oils						
1987/88	3,360	1,200	0	0	0	0
1988/89	2,478	885	0	0	0	0
Pulses						
1987/88	329	131	235	93	0	0
1988/89	200	80	1,060	422	2,018	802
Total						
1987/88		2,098		1,480		2,546
1988/89		1,385		422		1,922
Maximum absorbable						
Cereal equivalent						
1987/88			7,771	1,386	11,561	2,063
1988/89			0	0	1,543	263
Vegetable oils						
1987/88			0	0	0	0
1988/89			0	0	0	0
Pulses						
1987/88			235	93	0	0
1988/89			1,060	422	2,018	802
Total						
1987/88				1,480		2,063
1988/89				422		1,066

Commercial import capacity surplus to vegetable oil import requirements offsets some additional cereal needs.

Southeast Asia

Southeast Asia basic food data

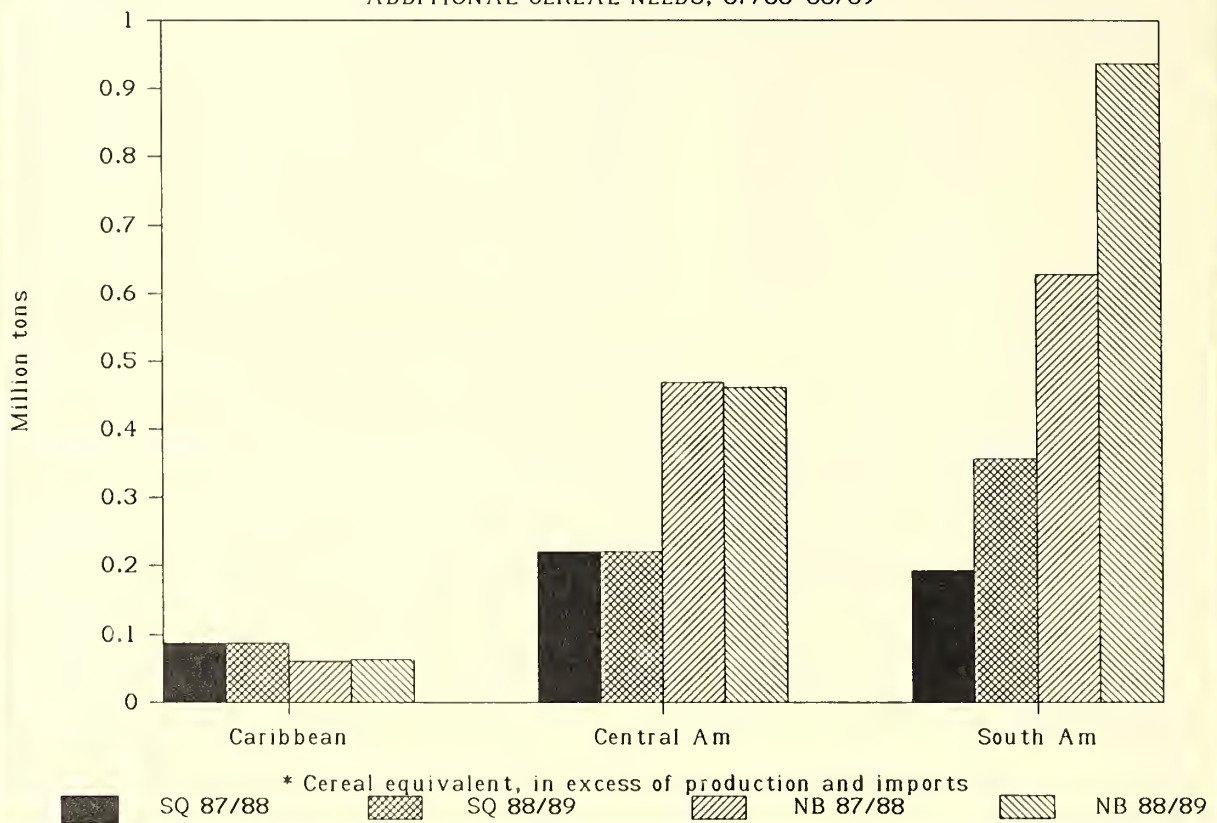
Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- <u>1,000 tons</u> -----			<u>Thousand</u>	<u>Kilos</u>
Major cereals					
1980/81	42,590	2,891	5,538	261,797	180
1981/82	46,585	3,858	4,011	267,884	187
1982/83	45,867	4,381	4,058	273,882	185
1983/84	49,912	3,683	4,956	279,852	197
1984/85	52,227	3,452	4,292	286,083	193
1985/86	52,779	4,676	3,431	292,456	191
1986/87	53,807	5,022	3,652	299,091	194
1987/88	53,655	4,491		305,774	
1988/89	55,315	4,491		312,703	

Southeast Asia cereal use, additional needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition- based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent						
Consumption						
1987/88	63,846	61,106	968	164	821	168
1988/89	65,289	62,493	1,004	159	898	172
Stock adjustment						
1987/88			1	0	1	0
1988/89			8	2	8	2
Total						
1987/88			970	164	822	169
1988/89			1,012	161	907	174

Latin America

LATIN AMERICA ADDITIONAL CEREAL NEEDS, 87/88-88/89



Caribbean

Caribbean basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- <u>1,000 tons</u> -----			<u>Thousand</u>	<u>Kilos</u>
Major cereals					
1980/81	852	99	979	12,947	139
1981/82	711	131	896	13,144	123
1982/83	763	115	935	13,345	125
1983/84	752	139	964	13,542	130
1984/85	801	95	1,062	13,680	138
1985/86	666	73	1,149	13,850	131
1986/87	736	74	1,075	14,030	129
1987/88	751	74		14,210	
1988/89	754	74		14,390	

Caribbean cereal use, additional food needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition- based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent						
Consumption						
1987/88	2,262	2,214	87	11	61	8
1988/89	2,293	2,244	87	11	64	8
Stock adjustment						
1987/88			6	1	6	1
1988/89			0	0	0	0
Total						
1987/88			93	12	66	8
1988/89			87	11	64	8
Maximum absorbable						
Cereal equivalent						
1987/88			93	12	66	8
1988/89			87	11	60	7

Central America

Central America basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- <u>1,000 tons</u> -----			<u>Thousand</u>	<u>Kilos</u>
Major cereals					
1980/81	2,456	405	708	20,344	156
1981/82	2,670	390	502	20,759	155
1982/83	2,518	334	661	21,327	150
1983/84	2,656	324	677	21,905	149
1984/85	2,840	386	654	22,547	150
1985/86	2,789	493	783	23,230	154
1986/87	2,653	485	773	23,912	143
1987/88	2,865	485		24,606	
1988/89	2,880	485		25,308	

Central America cereal use, additional food needs to support consumption, and stock adjustment

Commodity/year	Total use		Additional needs			
	Status quo	Nutrition- based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent						
Consumption						
1987/88	3,723	3,965	220	33	469	70
1988/89	3,829	4,072	220	32	461	65
Stock adjustment						
1987/88			25	4	48	7
1988/89			6	1	13	1
Total						
1987/88			244	37	517	77
1988/89			225	32	473	68
Maximum absorbable						
Cereal equivalent						
1987/88			244	37	457	68
1988/89			225	32	411	59

South America

South America basic food data

Commodity/year	Actual or forecast production	Beginning stocks	Net imports	Population	Per capita total use
	----- <u>1,000 tons</u> -----			<u>Thousand</u>	<u>Kilos</u>
Major cereals					
1980/81	3,898	1,016	2,589	55,803	116
1981/82	4,452	1,056	2,552	57,032	122
1982/83	4,486	1,089	2,496	58,319	121
1983/84	4,056	1,037	2,889	59,657	119
1984/85	4,779	864	2,367	61,046	114
1985/86	4,546	1,049	2,639	62,486	114
1986/87	4,464	1,081	3,119	63,955	119
1987/88	4,897	1,041		63,955	
1988/89	5,210	1,041		66,075	

South America cereal use, additional food needs to support consumption, and stock adjustment

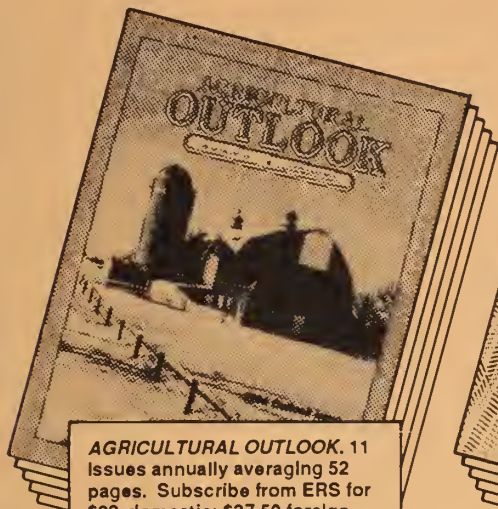
Commodity/year	Total use		Additional needs			
	Status quo	Nutrition- based	Status quo		Nutrition-based	
			Quantity	Value	Quantity	Value
	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>1,000 tons</u>	<u>Million \$</u>	<u>1,000 tons</u>	<u>Million \$</u>
Cereal equivalent Consumption						
1987/88	10,392	10,420	192	33	628	97
1988/89	10,744	10,778	356	54	937	133
Stock adjustment						
1987/88			0	0	57	7
1988/89			70	9	70	9
Total						
1987/88			192	33	685	104
1988/89			427	63	1,007	142
Maximum absorbable						
Cereal equivalent						
1987/88			192	33	546	82
1988/89			427	63	861	120

GLOSSARY OF TERMS

Status quo	A measure of per capita food availability in recent years
Nutrition-based	Per capita food availability sufficient to meet internationally accepted minimum caloric standards
Cereal equivalent	Cereal required to meet both cereal shortfalls and cereal equivalent
Import requirement	Imports necessary to achieve either status quo or nutrition-based food availability, including both commercial and concessional food shipments
Tons	Metric tons
Dollars	U.S. dollars unless otherwise specified
GNP	Gross national product
GDP	Gross domestic product

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